SERVICE MANUAL

For

CARE and OPERATION

of

MONOMELT SYSTEM

THE MONOMELT CO., INC.

1611-15 Polk Street N. E.

Minneapolis, Minnesota

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This Manual has been compiled for the purpose of assisting those in charge of Monomelt-equipped plants to get more thorough understanding of the Monomelt and to become familiar with the functioning of the various mechanisms.

The advice given is intended to cover every phase of Monomelt care and operation, including instructions on procedure when any unusual circumstances interrupt the proper functioning of the Monomelt.

If these instructions are followed carefully and adjustments made as directed, perfect results will be attained, including the most accurate heat regulation that it is possible to secure on a line-casting or type-casting machine.

Praper Temperatures

Lower pot	500 to 510 degrees
Monomelt pot.	550 to 575 degrees

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THE MONOMELT CO., INC.

General Offices and Factary

1611-15 Palk Street

MINNEAPOLIS, MINNESOTA

GRanville 2042

MAIN POT BURNERS AND GOVERNORS

Remove all burners, take them apart and clean them out thoroughly.

Main Pot Burners—Sizing the Orifices

It may be possible that the orifice or gas jet, which supplies the throat tubes, is too small. This should be about the size of a No. 57 twist drill. It would also be well to ascertain the size of the big burner orifice. This should be about the size of a No. 42 drill. If it is too small, it will have a tendency to backfire when the burner is turned very low. Avoid getting these orifices too small, and on the other hand if they are too large they will give a yellow, dirty flame. If the burners are left or restored to the same condition they were when they left the Linotype or Intertype factory, the user will get perfect results from these members. Leave air shutter on throat tubes wide open and close main burner air shutter about two-thirds closed.

Balancing Main Pat and Throat Burners

In re-assembling, it is best to make a temporary connection with a piece of hose, and with the burner held in the hand on the outside of the machine, light the gas and balance the flame by turning the gas cocks so as to have all the fire necessary coming from the throat tubes to heat that part of the crucible proper.

The throat tube flame should be about 1¼ or 1½ inches in length and to get this it is sometimes necessary to turn down the main burner cock enough to force more gas to the throat tubes. We are now providing a regulating valve to be used in place of the ⅛ inch pipe plug in the bottom of the (F-1397) pot gas burner feeder with which the balancing of the flames can be made so that all cocks can be run wide open. This little regulating valve closes down the gas as it enters the bottom of the main burner cock and is very efficient for balancing purposes.

Cutting Off Throat Tubes

Sometimes the throat tubes are so long that they reach up to and bear against the throat of the crucible, in which case it is advisable to cut off the tube to 2¾ inches in length so that the gas flame will have more freedom and at the same time the heat from the tubes will distribute better.

Type "D" Governor and By-Pass

In regulating and adjusting the new Type "D" Governor, you will observe on the side of the governor a small fillister head screw with lock nut. This is the

by-pass regulator. Run this screw out about ⅛ inch and then run the regulating wheel on the governor to the right until you have closed the burner down to a point where further movement in this direction of the governor has no effect on the flame. Then you will have the governor closed. Now run the by-pass screw in until you have reduced the size of the flame to a point where it will barely burn without back-firing. At this point, set the lock nut. Now open the governor by turning the regulating wheel in the opposite direction to a point which will establish a temperature of about 510 or 515 degrees. There it should remain without any further attention.

The new governor may settle somewhat after it has gone through a few days of heat. It may settle about 5 or 10 degrees; hence our instructions to set it when new at 510 or 515 degrees.

To Cleon Type "D" Governor

A large clean-out opening has been provided in the Type "D" governor so attention can be given this member without disconnecting any piping or removing the governor from the machines.

After removing the clean-out plug, take a piece of six-point reglet, or small stick, stretch a piece of cloth over the end, moistened in gasoline, and rub between the valve seat and end of valve, removing all accumulated carbon and the job is done without altering or affecting the governor setting.

Mouthpiece Reguloting Volve

The mouthpiece regulating valve is of the needle-point type with a graduated head to show just what it is doing all the time. You will find it is not very sensitive to a slight movement of the valve and for this reason you can get a. very close adjustment. Depend on this valve for all heat regulating to get solid slugs and clear face.

Owing to the fact that the temperature in the lower pot is held down to around 500 degrees, it will sometimes be found that on recasting small slugs it is necessary to increase the mouthpiece heat a little as the cooler metal passing through the mouthpiece on recasting has a tendency to cool it off.

Mouthpiece Burner

If the mouthpiece burner has a tendency to float and the gas jets do not cling closely to the burner, it is from lack of ventilation, or, in some cases, too much draft.

Take a piece of ¼-inch rod or a small rat-tail file, or some other round instrument and pierce the cement

running up on either side of the throat through to a point just in front of the main air vents running up on either side of the crucible. This is for the purpose of supplying an air draft upwards into the regular air channel for the mouthpiece burner and thus improve the burning of this member. These holes are present in all late model Lintypes and are a part of the regular casting of the Intertype crucible.

After you have secured a steady, uniform burning of the mouthpiece by reason of the vents above described, see that the throat tubes do not emit a flame longer than about 1½ inches and that the temperature in your main pot is held down to about 510 to 515 degrees.

HANDLING NATURAL GAS

Natural gas is not easy to handle and as this gas seems to vary as to quality and nature in different localities, some slight variations from the rule here laid down may be necessary according to the nature of the gas.

Natural gas is very light and is easily snuffed out, especially when burning in a draft as is the case with throat tubes.

Seldom will you find the throat tubes burning satisfactorily in the natural gas fields and all kinds of stunts have been resorted to, such as cutting the bottom out of tobacco cans and putting them over the tubes, cutting off the tubes, squeezing the tips of the tubes together, cutting the tubes off on a slant one way and another, enlarging the orifice to a point where a large, yellow flame comes rolling out, etc.

A very successful way of handling this perplexing problem in the natural gas regions is as follows: Make the orifice size of the large burner the size of a No. 45 or 46 twist drill. Make the throat tube orifice the size of a No. 60 twist drill and remove the air shutter. Cut off the throat tubes to 2 inches or a little less in length, square the ends up with a file. Then with the peen of a light hammer, peen the top edge of the tubes toward the inside of the tube, making a little flanger around the inside at the top of the tube. This little flange will tend to take hold of the gas as it passes out and hold the flame from slipping out of the tube. Throat tubes provided in this manner will hold their own and burn lustily without going out with any reasonable size main burner fire burning under them.

PERFORMANCE OF NATURAL GAS IN THE MOUTHPIECE BURNER AND HOW TO CONTROL IT

The same characteristics in natural gas that make it difficult to handle in the throat tubes also make it an uncertain performer in the mouthpiece burner and care must be exercised with drafts to insure its not rushing to the outside of the burner and burning up the outside of the pot jacket, leaving the inside end of the burner with a scanty blaze or absolutely barren of any fire at all.

To secure successful performance of the mouthpiece burner when using natural gas, first make the gas orifice the size of a No. 60 twist drill and entirely remove the air shutter on the mixer body. Strict care must be taken regarding the mouthpiece burner air vents through the asbestos packing as minutely described elsewhere in this manual. Then before the Monomelt is attached to the pot, cut away a small portion of the Monomelt casting (this has been done on later models) at the point where it meets the lower pot back throat vent flue, so that the draft passing up through the hole through the cement packing will find easy entrance to a good draft current passing upward out the top of the Monomelt. This encourages the gas flame of the mouthpiece burner to follow it to the end of the burner and to burn lustily the entire length of the mouth burner and throw off an even heat all the way across.

MONOMELT BURNERS AND GOVERNOR

Removing Monomelt Burners and Governor

The Monomelt burners and governor are held in place by two hexagon head ¼-inch nuts. A service gas cock for the Monomelt is provided so attention can be given to the Monomelt burners without stopping operation of the machine and after disconnecting the union immediately above the service cock, the entire burner and governor mechanism can be removed with ease.

Things Which Interfere With Proper Action

If metal is carelessly dumped into the Monomelt, small chips or metal dust may get into and clog up the auxiliary burner valve operating mechanism; especially is this true when feeding sweepings from the floor around the machine. Also see that no molten metal has splashed on the valve operating lever. This lever must be free to transmit the expansion and contraction of the thermostat to the auxiliary valve and if necessary remove the fulcrum pin and loosen up all moving parts, cleaning all contact points, etc.

If this fails to correct the trouble, remove your entire burner and governor assembly and examine the governor tube for any defects and also take notice of the length of the rod inside this tube. The rod in question should be long enough to reach out nearly to the valve operating level, so that the contact point between it and the adjusting screw will be as close as possible to the fulcrum point on the operating lever. The closer this point is to the lever as described, the easier the action of this mechanism. *Never lengthen the rod,* but if necessary, shorten the tube.

On one side of the constant burner is a hole to provide a gas jet against the feed spout and this must be kept burning or the spout may freeze up. This is the only difference between the two burners.

At the end of all gas passages through the head of the burners is a cleanout plug.

Gas Regulating Orifice

The regulators on the adjustable orifices should not be run back beyond a point where they have a tendency to stop, as they may become damaged and regulation for size of flame ruined. They are for the purpose of regulating height of flame only and are not for regulating temperature.

FITTING MONOMELT TO OLD STYLE LINOTYPE CRUCIBLE

If yours is an old model Linotype crucible having a cleanout plate on top of the throat that will not allow the Monomelt to set properly on the pot, it is only necessary to take a hammer and gently peen back the Monomelt casting where it strikes the cleanout plate. The casting of the Monomelt is aluminum and is rather soft and easily yields to this treatment so no filing is necessary. The whole thing will not consume 30 seconds' time. However, care must be taken not to strike the casting too hard as it might break off, but any ordinary mechanic should appreciate this point sufficiently to have no trouble.

OLD STYLE LINOTYPE MACHINE USING TWO MOUTHPIECE TUBES

Locate the mouthpiece regulating valve in the customary position, removing therefrom the little orifice. On the end of this screw is an ordinary ⅛-inch coupling. We will now leave the mouthpiece regulating valve and give our attention to the main burner.

Branching off from the hose connection at the base of the main burner out of the top of which is the connection for valve for the main pot burner and running diagonally upward to an angle of about 45 degrees

toward the front is a little 2½ or 3-inch nipple leading in to a "T" out of which on either side are common "L's" looking up into which is screwed the stop cocks, nipples, etc., for the two mouthpiece tubes.

Remove the 2½ or 3-inch nipple and fill it full of metal, completely shutting off any flow of gas through this section. Now remove the outside "L" and in its place put a "T," screwing the mouthpiece tube into the side of the "T" which will leave this tube in the same relative position as it was when it was screwed into the "L." This leaves you the open end of the "T" looking out toward the side of the machine. You will now bring this "T" and the mouthpiece regulating valve together by using a piece of ¼ or 5/16-inch coppered tubing with fittings the same as are used around an automobile or gasoline engine which can be procured at any automobile accessory house, and you have the mouthpiece burners or tubes under direct control of the mouthpiece regulating valve with as good results, nearly, as you could get with a horizontal mouthpiece burner. However, it must be remembered that the late style Linotype crucibles and pots equipped with the horizontal mouthpiece burner and late main pot burners and throat tubes are in all cases preferable to the old style, but there is no reason why excellent service cannot be attained if the burners are hooked up in the manner as described above.

There is still another way that the hookup can be made, but the mouthpiece regulating valve is not left in so handy a location. In this case we remove the 2½ or 3-inch nipple, referred to above, and connect the regular mouthpiece regulating valve in its line, using the necessary length of nipples to make the assembly overall of the same length. In this case you remove the orifice from the regulating valve the same as in the former case. This makes a simpler installation, but the first described plan is preferable owing to its convenience.

CLEANING THE METAL

With the dirt paddle supplied with your Monomelt, reach into the Monomelt and draw the dross to the front end of the crucible and squeeze it through the holes with an up and down movement of the paddle, and in less than a minute's time you will observe the dirt has been separated from the dross and the metal has been reclaimed. You can then lift the dirt out of the Monomelt crucible by means of spoon also supplied with your equipment which is full of ⅛-inch holes so as to let the metal drain through. This is a very simple process, but means much in the saving of metal.

LOW METAL ALARM

There is very little chance of trouble with the low metal alarm if the Monomelt is cleaned at regular intervals. See that all dirt, metal chips and frozen crusts of metal are cleared away from the float and working parts and that the bell hammer operating trigger has plenty of freedom.

FLOODING

There is very little danger from flooding, and if it occurs it is likely to be from neglect or overloading.

Do not fill the Monomelt full. The molten metal should not be higher than to within ½ inch of the overflow. Likewise, it should not be permitted to run dry nor should the dross and dirt be allowed to accumulate in the Monomelt crucible until it is so thick that the heat cannot penetrate the mass and reach the new slugs as they are introduced.

Remove the Monomelt hopper by loosening the ¼-inch round head screw on side and see that all dirt and metal crusts are cleared away from upper end of valve rod and that the rod has freedom of action.

Examine the float rod. If the pump plunger rod pin has slipped through too far, it will catch the float rod and bend it and cause a binding. Also see that the float has no interference from plunger, well or side of lower crucible.

The flat copper spring (late models have coil spring) should have a slight pressure upward against the valve lever and it is possible for this flat spring to become damaged if the Monomelt runs dry, which would permit the lower pot to run low, and the float settle until it pulled the valve lever down to a point where it might strike the end of the spring or possibly slide under it, in which case you would get flooding.

STICKING PLUNGERS CAUSING POOR SLUGS

Plungers should be cleaned regularly, though these cleaning periods will not be so frequent with the Monomelt system.

Where plungers fit snugly there is likely to be an accumulation of dirt around the side walls of the well near the bottom, giving the impression that the well is smaller at the bottom than at the top. Care must be taken that this accumulation is scraped off so that the plunger will continue on its descent until picked up by the cam. If the plunger settles to the bottom of the well before the cam picks it up, it is too loose and in either case a poor slug will result.

Late style Mergenthaler plungers have an adjustable port in the bottom and with this you can regulate for the proper relief of compression. A plunger when operating properly should settle to within ¼ inch of the bottom of the stroke and you should regulate the adjustable port so as to accomplish this result. Solid plungers that do not settle enough should be drilled through the bottom with a drill of sufficient size to let the plunger settle as above described, usually about a No. 45 to 52 hole is sufficient, but in no case should the compression be relieved enough to let the plunger hit the bottom of the well.

INSTALLATION OF NEW CRUCIBLE

You will find the installation of a new crucible very simple. After removing the Monomelt burner, you will observe the head of a ¼-inch flathead screw. After removing this screw, disconnect the float rod and the crucible can be lifted out with a pair of pliers.

The lugs on the new crucible may be a little wide and require some dressing down with a file. Take off whatever is necessary to let the crucible slide into place comfortably without binding and reassemble the machine as it was before.

GAS PRESSURE AND PRESSURE REGULATORS

Every gas equipped plant should be provided with a suitable main line gas pressure regulator and the main gas line should be large enough to supply all machines with ease. This main line size will depend entirely upon the number of machines drawing gas from it and should be just as short and straight as possible, with no unnecessary bends or elbows. As the difference in prices on pipe sizes is small, it is best to use pipes of ample size.

The following table will serve to guide you in selecting the right size pipes and governor for your plant:

Plant of 1 to 3 Machines	¾″
Plant of 4 to 6 Machines	1 ″
Plant of 7 to 12 Machines	1¼″
Plant of 13 to 20 Machines	1½″
Plant of 21 to 30 Machines	2 ″

While it is unnecessary to use a governor larger than those given in the above list for a stated number of Linotypes, the largest governer will control the gas for one or two Linotypes just as well as the smaller governor.

Taps taken off the machine gas line other than for the typesetting machines should be considered in the

light of their burner capacities and due allowance made for them.

Place the pressure governor in the main line near the machines, conveniently located for periodical inspection and adjust to a pressure of not more than 3.0 nor less than 2.5.

PRESSURE REGULATORS FOR BOTH ARTIFICIAL AND NATURAL GAS

We recommend for all gas pressure regulation the L. & M. Sensitive Low Pressure Gas Regulator put out by the B-Line Boiler Co., of Cleveland. The number, sizes, net prices and code word for the various governors are as follows:

No.	Size	Net Prices	Code
3	¾-inch	$12.00	Terret
4	1 -inch	15.00	Terso
5	1¼-inch	17.00	Testate
6	1½-inch	19.00	Tester
7	2 -inch	23.00	Textile
8	2½-inch	26.00	Texture

In offices where the old style mercury gas pressure regulators are used, you will proceed as follows: provide yourself with about one-half pound of mercury and pour into the top of the regulator around the float just a sufficient amount of mercury to seal it—that is to say, when you press the float down to let a little gas pass, there will be no escape of gas through the mercury past the float. No more mercury is necessary beyond this point and it is not advisable to add any more.

You will weight the regulator with sufficient weight to establish a pressure of not more than 3.0 or less than 2.5 at the machine pot. After you have added a sufficient number of slugs to establish this pressure, you will remove them, put them in a ladle and melt them down and run them into one solid weight with a hole in the center about ½ or ⅜ inch so that weight will remain in the properly balanced position on the float. This feature is important, as slugs laid on promiscuously, as is the custom in many offices, drop off from the vibration of the building, the floor or the machine, and work down into the mercury, which dissolves the lead and soon puts the governor out of commission.

To find the pressure of gas in any plant where there is no pressure gauge, immerse the end of the gas hose into bucket of water, turn on the gas and withdraw the hose until the gas overcomes the water pressure and begins to escape by emitting bubbles. The length of the hose remaining in the water is the equivalent of gas pressure expressed in inches.

THE EQUIVALENT OF OUNCES, PER SQUARE INCH, IN INCHES OF HEIGHT OF COLUMNS OF WATER AND MERCURY

Ounces	Inches of Water	Inches of Mercury
1	1.73	.127
2	3.46	.256
3	5.20	.382
4	6.93	.510
5	8.66	.637
6	10.39	.765
7	12.12	.892
8	13.85	1.019
9	16.59	1.148
10	17.32	1.275
11	19.05	1.402
12	20.78	1.529
13	22.52	1.658
14	24.25	1.785
15	25.98	1.913
16	27.71	2.036

TO INCREASE CAPACITY OF METAL FLOW

If Monomelt fails to supply sufficient metal to the lower pot when casting furniture or large, heavy slugs, loosen the spring which pulls upward against the float and valve lever, and move it out of the way so valve will be free to remain open and metal can flow continuously from the Monomelt to lower pot. The float will automatically close the valve and shut off the flow of metal when the lower pot becomes full.

TURNING OUT FIRE TO SAVE GAS

There is no good reason why the Monomelt cannot be turned off at night. It will melt down a full pot of metal in about 40 minutes and the quantity of metal can be allowed to run a little low toward the close of the day so that less time will be required to melt it down in the morning.

It is not good practice to turn out the gas under the main pot of any gas heated metal pot, owing to the danger of the pot cracking as it heats up in the morning. Also all thermostat governors work at their best when kept under constant heat.

In offices where the gas is turned off at night under the lower pot, it is advisable to withdraw the cotter pin that connects the float rod to the valve lever as the shrinking of the metal in the lower pot as it cools has a tendency to pull down on the float and open the valve, and may result in a little flooding owing to the

fact that the metal in the Monomelt will melt down and become fluid before the metal in the lower pot. The valve lever spring will hold the Monomelt valve closed, but *do not turn the machine over until after you have replaced the cotter pin.*

VENTILATOR PIPES FOR TYPESETTING MACHINES

There are laws in many states requiring the installation of vent pipes on all machines or devices using gas burners for the purpose of carrying away the poisonous carbon monoxide gas and this should be done in all cases, whether there is a compulsory law for it or not.

The installation of a Monomelt on a typesetting machine does not make the ventilation of any more importance than on a machine without Monomelt, but provision is made in the hopper casting of the Monomelt for vent pipe connections for the purpose of carrying off the gas fumes from the burners and will at the same time carry off any smoke or fumes that may arise from the metal in the pot of the Monomelt. However, there is nothing of an injurious nature in the way of fumes or gases that can arise from molten metal which is carried at as low a temperature as metal in the Monomelt or typesetting machines is carried.

In providing vent pipes for typesetting machines, and especially those on which Monomelts have been installed, care must be taken in arranging the system.

The best known system of ventilation is one which provides for an artificial draft by a motor driven fan, located some place in the pipe line which will maintain a uniform draft, but in the absence of such a device, the line can be carried into any good flue or chimney which has a good free draft.

The lower end of the vent pipe, or that part which extends down to the Monomelt, should be of an oblong funnel shape and not extended down over the Monomelt flue, but rather setting above it with sufficient space so that one's hand could be passed over the Monomelt flue under the vent pipe with ease. At the same time the oblong funnel-shaped vent pipe immediately over the Monomelt should be about five inches in length and three inches in width, to provide for the travel of the pot, and this section of the pipe offset sufficient to let the second elevator bar pass the pipe on its ascent and descent without interference.

Test the vent system for draft and if there is not sufficient draft to noticeably draw the flame of a burning match toward the open end of the vent pipe with

the match held an inch or so from the edge of the pipe, it is not a good vent. The other end of the pipe may be extending into the flue too far, or, as has been found in some cases, it may be reaching through the flue and clear up against the opposite side, which will cut off the draft.

Also examine the outlet of the flue on the roof and if the top of the chimney is below the level of some roof in close proximity, the aircurrent may be passing over this roof and down into the chimney, which will kill the draft. In a case like this, the chimney must be extended either by building higher or putting an extension pipe on it. At any rate, do not overlook tbe importance of a good draft in the ventilating system, as a poor draft will make your ventilating system worthless.

One of the signs of a poor ventilating system will be a sweating of the pipes, causing an accumulation around the joints of the pipe and formations of crusty matter along the outside of the pipe where this moisture has run down. A pipe with a good draft will remain dry and if no dampness is present in the ventilating system, there is practically no deterioration.

The reason for recommending the lower end of the ventilating pipe to be held slightly above the top end of the Monomelt pipe is so that the draft in the ventilating system will not create a pull on the gas burners, interfering with their proper burning, or, on the other hand, if the draft in the ventilating system is poor and the vent pipe should be connected tightly around the Monomelt pipe, this would have a tendency to smother the gas fire and if a ventilating system of this kind should be connected direct to a flue or chimney, the effect of various air drafts or wind would be transmitted to the Monomelt and Linotype (or Intertype) pots.

For instance, on days of high wind velocity there would be so much draft that it would be difficult to keep the gas burners lit. At the same time, the excessive draft would have a tendency to draw the heat away from around the pots. On the other hand, on days with no wind at all, there would not be sufficient draft to permit of proper burning of your fires and your burners would become smothered.

ELECTRIC MONOMELTS

The electric Monomelt does not greatly differ from the gas model—only in the method of heating.

The practice in many offices of using a renewal fuse is not good for the season that a good firm contact cannot be maintained between the cartridge ends and

the fuse. The fuse being of soft metal yields under pressure of the metal caps of the cartridge and the contact becomes less and less until they finally begin to arc and either burn out or set up a carbon deposit which insulates them from a contact. The heat from current passing through them tends to assist the soft fuse in yielding from the pressure of the cartridge caps. In all cases, use the old style cartridge fuse with soldered connections and never use a fuse with higher amperage than necessary to carry the load. Remember, the fuse is the "safety valve" on your electric line and is there for the purpose of protecting your heating element in case of a short or ground. Fuses are cheaper than heating elements or motors and if a fuse continues to "blow" call in an electrician and have the ground or short located before more serious damage results.

Following is a table of the correct amperage fuses to be used on the various electric pots and Monomelts:

100-110 Volt A.C.-D.C.	2 20-Amp.—1	5-Amp.
220-250 Volt A.C.	2 10-Amp.—1	3-Amp.
220-250 Volt D.C.	2 20-Amp.—1	5-Amp.

Above table on fuses applies to both the Linotype Cutler-Hammer pot and the Monomelt.

TO CHANGE TEMPERATURES

To increase the temperature in the Machine pot, remove the slotted cap in the rear end of the thermostat and turn the small slotted screw inside the thermosat to the right. To decrease the temperature, turn it to the left.

To increase the temperature in the Monomelt pot, remove the theremostat cover of the Monomelt pot and turn the slotted headless screw at the lower right hand corner to the right, as indicated by an arrow on the horizontal lever. To decrease the temperature, turn it to the left.

WHEN METAL DOES NOT FEED

When the metal does not feed from the Monomelt to the machine pot it is due to too low a temperature in the Monomelt pot. The Monomelt pot temperature must be between 550° and 575° F., otherwise the metal will freeze up in the Monomelt crucible spout. This condition is not due to dross.

THERMOMETERS

Good slugs, or type, are produced only at a certain definite temperature. Paper browning or burning tests are inaccurate. A good thermometer is the only positive method of determining temperatures and will save time.

REPLACING FLAT HEATING ELEMENTS

To remove the flat heating elements from the Monomelts is a very simple operation. Remove Monomelt hopper and you will see the heads of four hexagon head screws that are slotted for a screw driver. These screws are on the edge of the Monomelt body and extend down through the Monomelt into the grid or plate that binds the elements up against the bottom of the crucible.

One or two turns of these screws is all that is necessary to loosen the elements, so they can be pulled out easily from the front, after terminal wire connections have been disconnected and the two R. H. brass screws removed at bottom corners of terminal board.

To replace elements you simply reverse this operation, being careful not to pull up grid binding screws too tight.

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